



U.S. Army Research, Development and Engineering Command

ARL Overview for BABEL Proposers' Day Meeting



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

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Mission and Make-up

The Army's principal lab for physical, computational, and information sciences: Provide research, technology, and analyses

advanced computing
network science
power and energy
materials chemistry

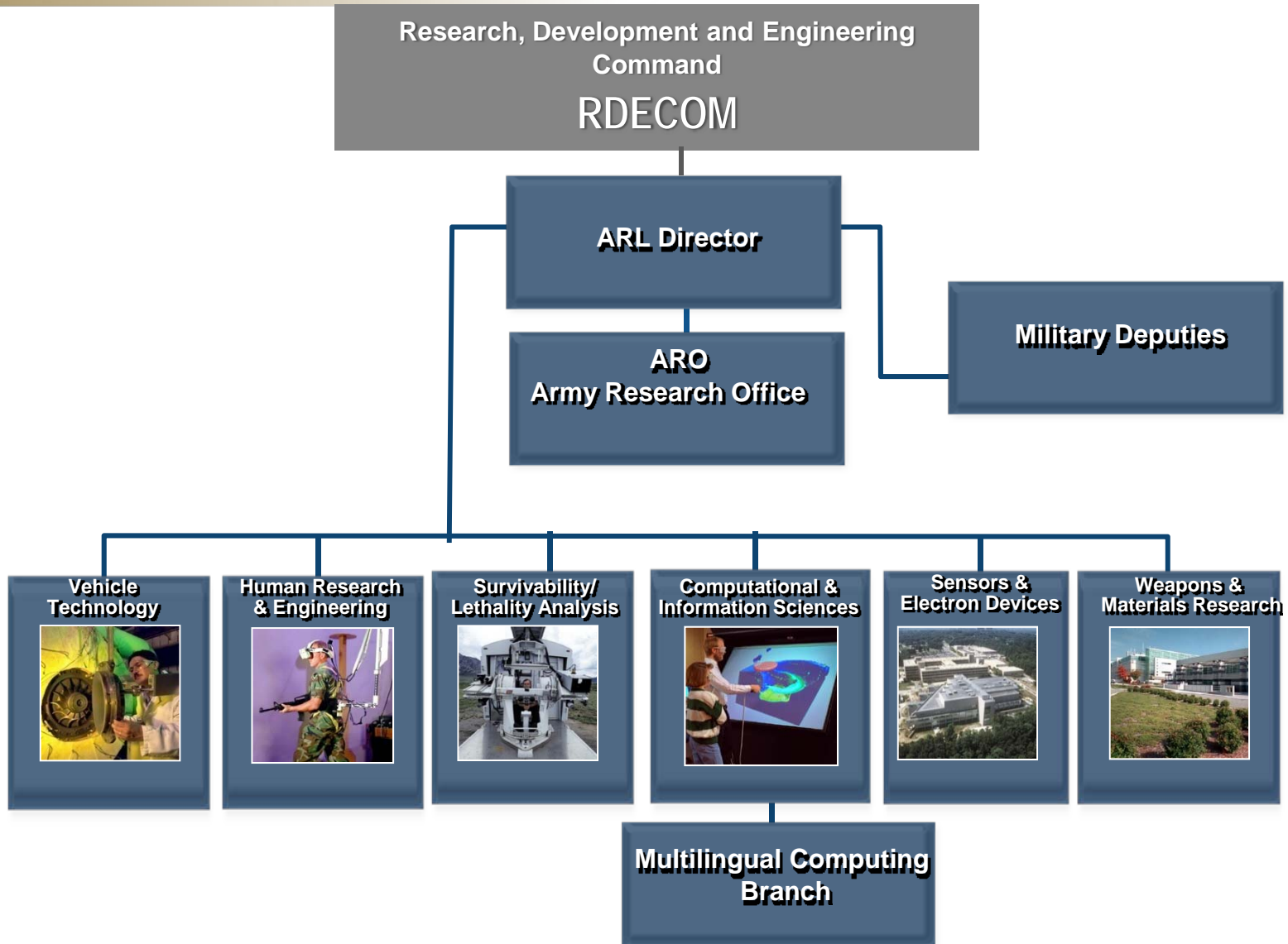
sensors
robotics
human-machine interaction
human performance

Conduct Internal research (1700 scientists, engineers, technicians) and support external research (e.g., Multi-University Research Initiatives, Collaborative Technology Alliances)

Location

HQ in Adelphi MD (Washington DC suburbs)
Presence at Aberdeen Proving Ground
Army Research Office (ARO) in Research Triangle NC
Field Units co-located with Army posts





Objective:

Provide machine translation (MT) and NLP technologies to support both exploitation of information and communication with local nationals or coalition partners

Research Focus:

- Preprocessing (speech, image) and translation for low and no-resource languages
 - Unique linguistic data sets (in-country collection)
 - Techniques to maximize data, modeling/statistical
 - Human-in-loop development w/iterative improvement
 - Experiments on hybrid components
- Parallel programming/workflow frameworks for exploitation of massive document collections

Selected Accomplishments:

- SMT in specialized domains for low-resource languages
- Lab evaluations of DARPA speech translation systems for CENTCOM prior to fielding

Transitions

- OCR + MT integration to fielded systems
- Statistical Machine Translation (SMT) to CENTCOM for translating English medical manuals into Dari to train local doctors and medics

